# **EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"20040137569"	US-PGPUB; USPAT	OR	ON	2006/07/29 12:28
L2	0	"200400388888242"	US-PGPUB; USPAT	OR	ON	2006/07/29 12:28
L3	1	"20040038242"	US-PGPUB; USPAT	OR	ON	2006/07/29 12:28
L4	1	"20030232350"	US-PGPUB; USPAT	OR	ON	2006/07/29 12:29
L5	1	"20040213797"	US-PGPUB; USPAT	OR	ON	2006/07/29 12:30
L6	1	"20050025751"	US-PGPUB; USPAT	OR	ON	2006/07/29 12:30
L7	1	"20040137569"	US-PGPUB; USPAT	OR	ON	2006/07/29 12:40
L8	273	dishevelled	US-PGPUB; USPAT	OR	ON	2006/07/29 12:41
L9	10	L8 and (delta-3)	US-PGPUB; USPAT	OR	ON	2006/07/29 12:41

7/29/06 12:44:32 PM Page 1

```
RESULT 4
DLL3 MOUSE
     DLL3 MOUSE
ID
                    STANDARD;
                                    PRT;
                                           592 AA.
     O88516; O35675; Q80W06; Q9QWL9; Q9QWZ7;
AC
DT
     01-DEC-2000, integrated into UniProtKB/Swiss-Prot.
DT
     01-NOV-1998, sequence version 1.
DT
     07-MAR-2006, entry version 51.
DE
     Delta-like protein 3 precursor (Drosophila Delta homolog 3) (M-Delta-
DE
     3).
GN
     Name=Dll3;
os
     Mus musculus (Mouse).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC
     Muroidea; Muridae; Murinae; Mus.
OX
     NCBI_TaxID=10090;
RN
     [1]
RP
     NUCLEOTIDE SEQUENCE (ISOFORM 1).
RC
     STRAIN=C57BL/6 X DBA; TISSUE=Embryo;
     MEDLINE=97417575; PubMed=9272948;
RX
RA
     Dunwoodie S.L., Henrique D.M.P., Harrison S.M., Beddington R.S.P.;
RT
     "Mouse Dll3: a novel divergent Delta gene which may complement the
     function of other Delta homologues during early pattern formation in
RT
RT
     the mouse embryo.";
RL
     Development 124:3065-3076(1997).
RN
RP
     NUCLEOTIDE SEQUENCE, AND ALTERNATIVE SPLICING.
RC
     STRAIN=129/SvJ;
RX
     MEDLINE=98324780; PubMed=9662403; DOI=10.1038/961;
RA
     Kusumi K., Sun E.S., Kerrebrock A.W., Bronson R.T., Chi D.-C.,
RA
     Bulotsky M.S., Spencer J.B., Birren B.W., Frankel W.N., Lander E.S.;
RT
     "The mouse pudgy mutation disrupts Delta homologue Dll3 and initiation
RT
     of early somite boundaries.";
     Nat. Genet. 19:274-278(1998).
RL
RN
     [3]
     NUCLEOTIDE SEQUENCE (ISOFORM 1).
RP
RC
     TISSUE=Neural tube;
RA
     Nakayama K., Nakayama N., Tomooka Y., Hayashi Y., Takahashi M.;
RT
     "Specific expression of a divergent type of Delta in a set of earliest
RT
     generated neurons including the prospective subplate neurons.";
RL
     Submitted (APR-1998) to the EMBL/GenBank/DDBJ databases.
RN
RP
     NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).
     STRAIN=C57BL/6; TISSUE=Brain;
RC
RX
     MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA
     Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
     Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA
RA
     Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
     Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA
RA
     Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA
     Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
     Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA
     Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA
RA
     Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
     Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA
RA
     Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA
     Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA
     Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
     Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RΑ
     Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA
RA
     Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA
     Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
```

```
RT
     "Generation and initial analysis of more than 15,000 full-length human
RT
     and mouse cDNA sequences.";
RL
     Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC
     -!- FUNCTION: Inhibits primary neurogenesis. May be required to divert
CC
        neurons along a specific differentiation pathway. Play a role in
CC
        the formation of somite boundaries during segmentation of the
CC
        paraxial mesoderm.
CC
     -!- SUBUNIT: Can bind and activate Notch-1 or another Notch receptor
CC
        (Probable).
CC
    -!- SUBCELLULAR LOCATION: Membrane; single-pass type I membrane
CC
        protein (Probable).
CC
    -!- ALTERNATIVE PRODUCTS:
CC
        Event=Alternative splicing; Named isoforms=2;
CC
CC
          IsoId=088516-1; Sequence=Displayed;
CC
        Name=1;
CC
          IsoId=088516-2; Sequence=VSP 001376;
CC
    -!- TISSUE SPECIFICITY: Predominantly expressed in the neuroectoderm
CC
        and paraxial mesoderm during embryogenesis.
CC
    -!- DOMAIN: The DSL domain is required for binding to the Notch
CC
CC
    -!- PTM: Ubiquitinated by MIB (MIB1 or MIB2), leading to its
CC
        endocytosis and subsequent degradation (By similarity).
CC
     -!- DISEASE: A truncating mutation in D113 is the cause of the pudgy
CC
        (pu) phenotype. Pudgy mice exhibit patterning defects at the
CC
        earliest stages of somitogenesis. Adult pudgy mice present severe
CC
        vertebral and rib deformities.
CC
    -!- SIMILARITY: Contains 1 DSL domain.
CC
    -!- SIMILARITY: Contains 6 EGF-like domains.
CC
    -----
CC
    Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC
    Distributed under the Creative Commons Attribution-NoDerivs License
CC
    DR
    EMBL; AF068865; AAC40170.1; -; Genomic DNA.
DR
    EMBL; AF068865; AAC40169.1; -; Genomic DNA.
DR
    EMBL; Y11895; CAA72637.1; -; mRNA.
DR
    EMBL; AB013440; BAA33716.1; -; mRNA.
DR
    EMBL; BC052002; AAH52002.1; -; mRNA.
DR
    HSSP; P00740; 1EDM.
DR
    Ensembl; ENSMUSG00000003436; Mus musculus.
DR
    MGI; MGI:1096877; Dll3.
DR
    GO; GO:0005615; C:extracellular space; TAS.
DR
    GO; GO:0016021; C:integral to membrane; TAS.
DR
    GO; GO:0005112; F:Notch binding; NAS.
DR
    GO; GO:0001709; P:cell fate determination; NAS.
DR
    GO; GO:0007386; P:compartment specification; IMP.
DR
    GO; GO:0001701; P:embryonic development (sensu Mammalia); NAS.
    GO; GO:0007399; P:neurogenesis; NAS.
DR
    GO; GO:0007219; P:Notch signaling pathway; NAS.
DR
DR
    GO; GO:0001501; P:skeletal development; IMP.
DR
    InterPro; IPR001774; DSL.
DR
    InterPro; IPR006210; EGF.
DR
    InterPro; IPR001438; EGF 2.
DR
    InterPro; IPR000742; EGF_3.
DR
    InterPro; IPR001881; EGF Ca bd.
DR
    InterPro; IPR013111; EGF extracell.
DR
    InterPro; IPR006209; EGF like.
DR
    InterPro; IPR013032; EGF like req.
DR
    InterPro; IPR011651; Notch ligand N.
DR
    Pfam; PF00008; EGF; 5.
DR
    Pfam; PF07974; EGF_2; 1.
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DR
     Pfam; PF07657; MNNL; 1.
     PRINTS; PR00010; EGFBLOOD.
DR
     SMART; SM00181; EGF; 6.
DR
DR
     PROSITE; PS51051; DSL; FALSE_NEG.
DR
     PROSITE; PS00022; EGF 1; 6.
DR
     PROSITE; PS01186; EGF 2; 6.
DR
     PROSITE; PS50026; EGF_3; 6.
KW
     Alternative splicing; Developmental protein; Differentiation;
KW
     EGF-like domain; Membrane; Notch signaling pathway; Repeat; Signal;
KW
     Transmembrane; Ubl conjugation.
FT
     SIGNAL
                  1
                        32
                                 Potential.
FT
     CHAIN
                 33
                       592
                                 Delta-like protein 3.
FT
                                 /FTId=PRO_0000007510.
FT
     TOPO DOM
                       490
                 33
                                 Extracellular (Potential).
FT
     TRANSMEM
                491
                       511
                                 Potential.
FT
     TOPO_DOM
                512
                       592
                                 Cytoplasmic (Potential).
FT
     DOMAIN
                174
                       213
                                 DSL.
FT
     DOMAIN
                214
                       247
                                 EGF-like 1.
FT
     DOMAIN
                272
                       308
                                 EGF-like 2.
FT
     DOMAIN
                310
                       349
                                 EGF-like 3.
FT
     DOMAIN
                351
                       387
                                 EGF-like 4.
FT
     DOMAIN
                389
                       425
                                 EGF-like 5.
FT
     DOMAIN
                427
                       463
                                 EGF-like 6.
FΤ
     DISULFID
                218
                       229
                                 By similarity.
FT
    DISULFID
                222
                       235
                                 By similarity.
FT
     DISULFID
                237
                                 By similarity.
                       246
FT
     DISULFID
                276
                       287
                                 By similarity.
FT
     DISULFID
                281
                       296
                                 By similarity.
FT
     DISULFID
                298
                       307
                                 By similarity.
FT
     DISULFID
                       325
                314
                                 By similarity.
FT
    DISULFID
                319
                       337
                                 By similarity.
FT
    DISULFID
                339
                       348
                                 By similarity.
FT
     DISULFID
                355
                       366
                                 By similarity.
FT
     DISULFID
                360
                       375
                                 By similarity.
FT
     DISULFID
                377
                       386
                                 By similarity.
FT
     DISULFID
                393
                       404
                                 By similarity.
FT
    DISULFID
                398
                       413
                                 By similarity.
FT
    DISULFID
                415
                       424
                                 By similarity.
FT
     DISULFID
                431
                       442
                                 By similarity.
FT
     DISULFID
                436
                       451
                                 By similarity.
FT
     DISULFID
                453
                       462
                                 By similarity.
     VARSPLIC
FT
                585
                       592
                                 DWLIQVLF -> A (in isoform 1).
FT
                                 /FTId=VSP 001376.
FT
     CONFLICT
                94
                        94
                                 E \rightarrow K (in Ref. 3).
FT
     CONFLICT
                401
                       401
                                 G \rightarrow A \text{ (in Ref. 1)}.
SQ
    SEQUENCE
               592 AA;
                        62069 MW;
                                   1A84F8022E7E7DCC CRC64;
  Query Match
                         83.6%;
                                 Score 2729; DB 1;
                                                    Length 592;
  Best Local Similarity
                         82.8%;
                                 Pred. No. 1.2e-163;
  Matches 485; Conservative
                               33; Mismatches
                                                62;
                                                     Indels
                                                               6; Gaps
                                                                           3;
Qу
           1 MVSPRMSGLLSQTVILALIFLPQTRPAGVFELQIHSFGPGPGPGAPRSPCSARLPCRLFF 60
              Db
           1 MVSLQVSP-LSQTLILAFL-LPQALPAGVFELQIHSFGPGPGLGTPRSPCNARGPCRLFF 58
          61 RVCLKPGLSEEAAESPCALGAALSARGPVYTEQPGAPAPDLPLPDGLLQVPFRDAWPGTF 120
Qу
             59 RVCLKPGVSQEATESLCALGAALSTSVPVYTEHPGESAAALPLPDGLVRVPFRDAWPGTF 118
Db
Qy
         121 SFIIETWREELGDQIGGPAWSLLARVAGRRRLAAGGPWARDIQRAGAWELRCSYRARCEP 180
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Db	119	SLVIETWREQLGEHAGGPAWNLLARVVGRRRLAAGGPWARDVQRTGTWELHFSYRARCEP 178
Qy	181	PAVGTACTRLCRPRSAPSRCGPGLRPCAPLEDESVCRAGCSPEHGFCEQPGECRCL 236
Db	179	PAVGAACARLCRSRSAPSRCGPGLRPCTPFPDECEAPSVCRPGCSPEHGYCEEPDECRCL 238
Qy	237	EGWTGPLCTVPVSTSSCLSPRGPSSATTGCLVPGPGPCDGNPCANGGSCSETPRSFECTC 296
Db	239	
Qy	297	PRGFYGLRCEVSGVTCADGPCFNGGLCVGGADPDSAYICHCPPGFQGSNCEKRVDRCSLQ 356
Db	299	
Qy	357	PCRNGGLCLDLGHALRCRCRAGFAGPRCEHDLDDCAGRACANGGTCVEGGGAHRCSCALG 416
Db	359	:       :
Qy	417	FGGRDCRERADPCAARPCAHGGRCYAHFSGLVCACAPGYMGARCEFPVHPDGASALPAAP 476
Db	419	
Qy	477	PGLRPGDPQRYLLPPALGLLVAAGVAGAALLLVHVRRRGHSQDAGSRLLAGTPEPSVHAL 536
Db	479	:
Qy	537	PDALNNLRTQEGSGDGPSSSVDWNRPEDVDPQGIYVISAPSIYARE 582
Db	539	: :

This page gives you Search Results detail for the Application 10644548 and Search Result us-10-644-548-2.rag.

start

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OM protein - protein search, using sw model

Run on: June 9, 2006, 19:23:21; Search time 198 Seconds

(without alignments)

1346.248 Million cell updates/sec

Title: US-10-644-548-2

Perfect score: 3263

Sequence: 1 MVSPRMSGLLSQTVILALIF......DVDPQGIYVISAPSIYAREA 583

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2589679 segs, 457216429 residues

Total number of hits satisfying chosen parameters: 2589679

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A Geneseq 8:\*

1: geneseqp1980s:\*

2: geneseqp1990s:\*

3: geneseqp2000s:\*

4: geneseqp2001s:\*

5: geneseqp2002s:\*

6: geneseqp2003as:\* 7: geneseqp2003bs:\*

8: geneseqp2004s:\*

9: geneseqp2005s:\* 10: geneseqp2006s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result		% Query				
No.	Score		Length	DB	ID	Description
1	3263	100.0	583	4	AAB71740	Aab71740 Human Not
2	3246	99.5	587	5	AAU91338	Aau91338 Human nov
3	3237	99.2	587	4	AAM93686	Aam93686 Human pol
4	3237	99.2	587	8	ADL31553	Adl31553 Human pro
5	3231	99.0	618	6	ABR58644	Abr58644 Human can
6	3231	99.0	618	6	ABP97825	Abp97825 Amino aci

7	3231	99.0	618	6	ABU55878	Abu55878 Human not
8	3231	99.0	618	6	AAE34034	Aae34034 Human not
9	3231	99.0	618	6	ABP72567	Abp72567 Human Not
10	3231	99.0	618	6	ABR61826	Abr61826 Human del
11	3231	99.0	618	7	ABU63729	Abu63729 Human Not
12	3231	99.0	618	7	ADN38932	Adn38932 Cancer/an
13	3231	99.0	618	8	ADK00014	Adk00014 Human Not
14	3231	99.0	618	8	ADM41512	Adm41512 Human del
15	3231	99.0	618	8	ADL73026	Adl73026 Human Not
16	3231	99.0	618	8	ADM76012	Adm76012 Human Del
17	3231	99.0	618	8	ADQ14405	Adq14405 Human Del
18	3231	99.0	618	8	ADR20593	Adr20593 Human Not
19	3231	99.0	618	8	ADR41795	Adr41795 Human del
20	3231	99.0	618	8	ABM82106	Abm82106 Tumour-as
21	3231	99.0	618	8	ADR89381	Adr89381 Human Del
22	3231	99.0	618	8	ADS75457	Ads75457 Human Del
23	3231	99.0	618	9	ADX58106	Adx58106 Amino aci
24	3231	99.0	618	9	ADX70417	Adx70417 Human Del
25	3231	99.0	618	9	AEB77853	Aeb77853 Human not
26	3231	99.0	1009	8	ADU02432	Adu02432 Novel hum
27	3222	98.7	618	7	ABR61755	Abr61755 Human del
28	3210	98.4	582	3	AAY59442	Aay59442 Full leng
29	3110	95.3	561	3	AAY59441	Aay59441 Human del
30	2707	83.0	589	8	ADR88259	Adr88259 Rattus no
31	2707	83.0	589	8	ADR88256	Adr88256 Rattus no
32	2613	80.1	464	3	AAY59440	Aay59440 Human del
33	2355	72.2	969	4	ABG29063	Abg29063 Novel hum
34	1267	38.8	323	3	AAB32417	Aab32417 Human sec
35	1019	31.2	188	3	AAY59439	Aay59439 Human del
36	977.5	30.0	723	8	ADR89380	Adr89380 Human Del
37	977.5	30.0	740	2	AAW00876	Aaw00876 C-Delta-1
38	975.5	29.9	723	3	AAY79032	Aay79032 Human del
39	975.5	29.9	723	6	ABP97824	Abp97824 Amino aci
40	975.5	29.9	723	6	ABP72566	Abp72566 Human Not
41	975.5	29.9	723	6	ABR61825	Abr61825 Human del
42	975.5	29.9	723	7	ABR61754	Abr61754 Human del
43	975.5	29.9	723	7	ABU63728	Abu63728 Human Not
44	975.5	29.9	723	8	ADK00013	Adk00013 Human Not
45	975.5	29.9	723	8	ADM41511	Adm41511 Human del

This page gives you Search Results detail for the Application 10644548 and Search Result us-10-644-548-2.rai.

start

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OM protein - protein search, using sw model

Run on: June 9, 2006, 19:32:11; Search time 51 Seconds

(without alignments)

1000.595 Million cell updates/sec

Title: US-10-644-548-2

Perfect score: 3263

Sequence: 1 MVSPRMSGLLSQTVILALIF......DVDPQGIYVISAPSIYAREA 583

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 650591 segs, 87530628 residues

Total number of hits satisfying chosen parameters: 650591

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:\*

- 1: /EMC\_Celerra\_SIDS3/ptodata/2/iaa/5\_COMB.pep:\* 2: /EMC\_Celerra\_SIDS3/ptodata/2/iaa/6 COMB.pep:\* 3: /EMC\_Celerra\_SIDS3/ptodata/2/iaa/7 COMB.pep:\* 4: /EMC\_Celerra\_SIDS3/ptodata/2/iaa/H\_COMB.pep:\*
- 5: /EMC\_Celerra\_SIDS3/ptodata/2/iaa/PCTUS\_COMB.pep:\* 6: /EMC\_Celerra\_SIDS3/ptodata/2/iaa/RE COMB.pep:\*
- 7: /EMC\_Celerra\_SIDS3/ptodata/2/iaa/backfiles1.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		용				
Result		Query				
No.	Score	Match	Length	DB	ID	Description
1	3263	100.0	583	2	US-09-641-612-2	Sequence 2, Appli
2	2712	83.1	585	2	US-09-641-612-5	Sequence 5, Appli
3	1122.5	34.4	642	2	US-08-872-855-10	Sequence 10, Appl
4	977.5	30.0	728	2	US-08-981-392-2	Sequence 2, Appli
5	977.5	30.0	728	2	US-09-908-322-2	Sequence 2, Appli
6	971.5	29.8	728	2	US-09-310-685-11	Sequence 11, Appl
7	968	29.7	729	2	US-08-872-855-8	Sequence 8, Appli
8	967.5	29.7	723	2	US-09-068-740A-9	Sequence 9, Appli
9	967.5	29.7	723	2	US-09-423-753-27	Sequence 27, Appl

10	967.5	29.7	723	3	US-10-241-476-27	Sequence 27, Appl
11	961.5	29.5	702	2	US-09-068-740A-4	Sequence 4, Appli
12	961.5	29.5	723	2	US-09-641-612-6	Sequence 6, Appli
13	952.5	29.2	520	2	US-09-068-740A-3	Sequence 3, Appli
14	942.5	28.9	722	2	US-09-310-685-14	Sequence 14, Appl
15	939.5	28.8	722	2	US-08-981-392-12	Sequence 12, Appl
16	939.5	28.8	722	2	US-09-908-322-12	Sequence 12, Appl
17	933	28.6	713	2	US-08-872-855-5	Sequence 5, Appli
18	922.5	28.3	720	2	US-08-872-855-4	Sequence 4, Appli
19	916.5	28.1	721	2	US-08-872-855-7	Sequence 7, Appli
20	916.5	28.1	721	2	US-08-981-392-5	Sequence 5, Appli
21	916.5	28.1	721	2	US-09-908-322-5	Sequence 5, Appli
22	907.5	27.8	721	2	US-09-310-685-12	Sequence 12, Appl
23	898	27.5	685	2	US-08-872-855-2	Sequence 2, Appli
24	898	27.5	685	2	US-09-423-753-25	Sequence 25, Appl
25	898	27.5	685	2	US-09-641-612-7	Sequence 7, Appli
26	898	27.5	685	3	US-10-241-476-25	Sequence 25, Appl
27	895	27.4	717	2	US-08-872-855-9	Sequence 9, Appli
28	888	27.2	659	2	US-09-423-753-3	Sequence 3, Appli
29	888	27.2	659	3	US-10-241-476-3	Sequence 3, Appli
30	859.5	26.3	500	2	US-09-423-753-2	Sequence 2, Appli
31	859.5	26.3	500	3	US-10-241-476-2	Sequence 2, Appli
32	673	20.6	833	1	US-08-264-534-6	Sequence 6, Appli
33	673	20.6	833	1	US-08-083-590A-2	Sequence 2, Appli
34	673	20.6	833	1	US-08-465-500-6	Sequence 6, Appli
35	673	20.6	833	1	US-08-346-126-6	Sequence 6, Appli
36	673	20.6	833	1	US-08-346-128-6	Sequence 6, Appli
37	673	20.6	833	2	US-08-532-384-2	Sequence 2, Appli
38	673	20.6	833	2	US-08-893-828-6	Sequence 6, Appli
39	670	20.5	830	2	US-08-872-855-11	Sequence 11, Appl
40	666.5	20.4	832	2	US-08-981-392-6	Sequence 6, Appli
41	666.5	20.4	832	2	US-09-908-322-6	Sequence 6, Appli
42	664	20.3	833	2	US-09-310-685-2	Sequence 2, Appli
43	649.5	19.9	1193	1	US-08-400-159-10	Sequence 10, Appl
44	649.5	19.9	1193	2	US-08-611-729A-10	Sequence 10, Appl
45	649.5	19.9	1193	2	US-09-195-524-10	Sequence 10, Appl

This page gives you Search Results detail for the Application 10644548 and Search Result us-10-644-548-2.rapbm.

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OM protein - protein search, using sw model

Run on: June 9, 2006, 19:33:01; Search time 185 Seconds

(without alignments)

1459.753 Million cell updates/sec

Title: US-10-644-548-2

Perfect score: 3263

Sequence: 1 MVSPRMSGLLSQTVILALIF......DVDPQGIYVISAPSIYAREA 583

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2097797 seqs, 463214858 residues

Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Published Applications\_AA\_Main:\* Database :

- 1: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US07\_PUBCOMB.pep:\*
- 2: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US08 PUBCOMB.pep:\*
- 3: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US09 PUBCOMB.pep:\*
- 4: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US10A PUBCOMB.pep:\*
- 5: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US10B PUBCOMB.pep:\*
- 6: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US11\_PUBCOMB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		€				
Result		Query				
No.	Score	Match	Length	DB	ID	Description
1	3263	100.0	583	4	US-10-644-548-2	Sequence 2, Appli
2	3246	99.5	587	4	US-10-343-348-32	Sequence 32, Appl
3	3231	99.0	618	4	US-10-295-027-250	Sequence 250, App
4	3231	99.0	618	4	US-10-763-362-41	Sequence 41, Appl
5	3231	99.0	618	5	US-10-765-727-18	Sequence 18, Appl
6	3231	99.0	618	5	US-10-846-989-52	Sequence 52, Appl
7	3231	99.0	618	5	US-10-764-415B-35	Sequence 35, Appl
8	3231	99.0	618	5	US-10-845-834A-52	Sequence 52, Appl
9	3231	99.0	618	5	US-10-899-422-31	Sequence 31, Appl
10	3231	99.0	618	5	US-10-958-784-41	Sequence 41, Appl

11	3231	99.0	618	6	US-11-078-735-18	Sequence 18, Appl
12	3231	99.0	618	6	US-11-050-346-63	Sequence 63, Appl
13	3231	99.0	618	6	US-11-103-077-18	Sequence 18, Appl
14	3231	99.0	618	6	US-11-058-066-18	Sequence 18, Appl
15	2712	83.1	585	4	US-10-644-548-5	Sequence 5, Appli
16	2707	83.0	589	4	US-10-731-741-2	Sequence 2, Appli
17	2707	83.0	589	4	US-10-731-741-5	Sequence 5, Appli
18	2355	72.2	969	5	US-10-450-763-59422	Sequence 59422, A
19	1267	38.8	323	6	US-11-240-769-103	Sequence 103, App
20	1122.5	34.4	642	4	US-10-417-719-10	Sequence 10, Appl
21	978.5	30.0	942	4	US-10-763-362-40	Sequence 40, Appl
22	978.5	30.0	942	5	US-10-845-834A-51	Sequence 51, Appl
23	977.5	30.0	728	3	US-09-908-322-2	Sequence 2, Appli
24	977.5	30.0	728	3	US-09-783-931-2	Sequence 2, Appli
25	975.5	29.9	723	4	US-10-731-741-1	Sequence 1, Appli
26	975.5	29.9	723	5	US-10-723-860-2752	Sequence 2752, Ap
27	975.5	29.9	723	5	US-10-765-727-17	Sequence 17, Appl
28	975.5	29.9	723	5	US-10-846-989-51	Sequence 51, Appl
29	975.5	29.9	723	5	US-10-764-415B-34	Sequence 34, Appl
30	975.5	29.9	723	5	US-10-899-422-30	Sequence 30, Appl
31	975.5	29.9	723	5	US-10-958-784-40	Sequence 40, Appl
32	975.5	29.9	723	6	US-11-078-735-17	Sequence 17, Appl
33	975.5	29.9	723	6	US-11-050-346-62	Sequence 62, Appl
34	975.5	29.9	723	6	US-11-103-077-17	Sequence 17, Appl
35	975.5	29.9	723	6	US-11-058-066-17	Sequence 17, Appl
36	973	29.8	864	5	US-10-812-144-2	Sequence 2, Appli
37	. 973	29.8	864	5	US-10-846-989-5	Sequence 5, Appli
38	973	29.8	864	5	US-10-845-834A-5	Sequence 5, Appli
39	973	29.8	864	5	US-10-899-422-50	Sequence 50, Appl
40	973	29.8	864	5	US-10-958-784-7	Sequence 7, Appli
41	973	29.8	864	6	US-11-050-346-10	Sequence 10, Appl
42	973	29.8	864	6	US-11-103-077-29	Sequence 29, Appl
43	971.5	29.8	728	5	US-10-877-563-11	Sequence 11, Appl
44	971.5	29.8	728	6	US-11-022-478-11	Sequence 11, Appl
45	969.5	29.7	723	4	US-10-731-741-3	Sequence 3, Appli
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This page gives you Search Results detail for the Application 10644548 and Search Result us-10-644-548-2.rapbn.

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OM protein - protein search, using sw model

Run on: June 9, 2006, 19:33:56; Search time 17 Seconds

(without alignments)

433.587 Million cell updates/sec

Title: US-10-644-548-2

Perfect score: 3263

Sequence: 1 MVSPRMSGLLSQTVILALIF......DVDPQGIYVISAPSIYAREA 583

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 64916 seqs, 12643201 residues

Total number of hits satisfying chosen parameters: 64916

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA New:\*

- 1: /EMC\_Celerra\_SIDS3/ptodata/1/pubpaa/US09\_NEW\_PUB.pep:\* 2: /EMC\_Celerra\_SIDS3/ptodata/1/pubpaa/US06 NEW PUB.pep:\*
- 3: /EMC\_Celerra\_SIDS3/ptodata/1/pubpaa/US07\_NEW\_PUB.pep:\*
- 4: /EMC\_Celerra\_SIDS3/ptodata/1/pubpaa/US08 NEW PUB.pep:\*
- 5: /EMC\_Celerra\_SIDS3/ptodata/1/pubpaa/PCT\_NEW\_PUB.pep:\*
- 6: /EMC\_Celerra\_SIDS3/ptodata/1/pubpaa/US10 NEW PUB.pep:\*
- 7: /EMC\_Celerra\_SIDS3/ptodata/1/pubpaa/US11\_NEW\_PUB.pep:\*
- 8: /EMC\_Celerra\_SIDS3/ptodata/1/pubpaa/US60 NEW PUB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result		* Query				
No.	Score	Match	Length	DB	ID	Description
1	453.5	13.9	737	6	US-10-196-749-38	Sequence 38, Appl
2	453.5	13.9	737	7	US-11-296-092-15	Sequence 15, Appl
3	429.5	13.2	1523	6	US-10-196-749-290	Sequence 290, App
4	375	11.5	1450	7	US-11-217-997-6	Sequence 6, Appli
5	361	11.1	1398	7	US-11-217-997-4	Sequence 4, Appli
6	361	11.1	1404	7	US-11-217-997-2	Sequence 2, Appli
7	361	11.1	1547	7	US-11-217-997-22	Sequence 22, Appl
. 8	361	11.1	1577	7	US-11-217-997-16	Sequence 16, Appl

9	361	11.1	1577	7	US-11-217-997-20	Sequence 20, Appl
10	361	11.1	1594	7	US-11-217-997-18	Sequence 18, Appl
11	361	11.1	1620	7	US-11-217-997-42	Sequence 42, Appl
12	361	11.1	1653	7	US-11-217-997-40	Sequence 40, Appl
13	358.5	11.0	1418	7	US-11-217-997-38	Sequence 38, Appl
14	354.5	10.9	1403	7	US-11-217-997-12	Sequence 12, Appl
15	347	10.6	4590	6	US-10-505-928-569	Sequence 569, App
16	335.5	10.3	1198	7	US-11-217-997-14	Sequence 14, Appl
17	327	10.0	575	7	US-11-217-997-32	Sequence 32, Appl
18	318.5	9.8	259	7	US-11-217-997-34	Sequence 34, Appl
19	297.5	9.1	491	7	US-11-217-997-30	Sequence 30, Appl
20	297	9.1	1821	6	US-10-505-928-451	Sequence 451, App
21	281	8.6	342	7	US-11-038-753-1	Sequence 1, Appli
22	269.5	8.3	233	7	US-11-321-421-110	Sequence 110, App
23	260	8.0	575	6	US-10-511-937-2625	Sequence 2625, Ap
24	256.5	7.9	567	7	US-11-246-999-50	Sequence 50, Appl
25	254.5	7.8	472	7	US-11-217-997-26	Sequence 26, Appl
26	252.5	7.7	724	7	US-11-293-697-3263	Sequence 3263, Ap
27	244	7.5	494	7	US-11-246-999-30	Sequence 30, Appl
28	241	7.4	439	7	US-11-293-697-2765	Sequence 2765, Ap
29	241	7.4	4391	7	US-11-183-325-56	Sequence 56, Appl
30	238	7.3	469	7	US-11-246-999-41	Sequence 41, Appl
31	233	7.1	2026	6	US-10-505-928-831	Sequence 831, App
32	231.5	7.1	5738	6	US-10-505-928-150	Sequence 150, App
33	226	6.9	1597	7	US-11-297-134-61	Sequence 61, Appl
34	220.5	6.8	495	6	US-10-511-814-5	Sequence 5, Appli
35	219	6.7	1435	6	US-10-196-749-581	Sequence 581, App
36	218	6.7	1300	6	US-10-196-749-269	Sequence 269, App
37	217.5	6.7	509	6	US-10-196-749-52	Sequence 52, Appl
38	216.5	6.6	1743	6	US-10-196-749-451	Sequence 451, App
39	215.5	6.6	3396	6	US-10-505-928-449	Sequence 449, App
40	213.5	6.5	4440	6	US-10-196-749-525	Sequence 525, App
41	209.5	6.4	1193	6	US-10-505-928-537	Sequence 537, App
42	204.5	6.3	636	6	US-10-521-401A-3	Sequence 3, Appli
43	201.5	6.2	1776	6	US-10-933-854-3	Sequence 3, Appli
44	198.5	6.1	798	6	US-10-511-937-2445	Sequence 2445, Ap
45	194.5	6.0	448	6	US-10-196-749-408	Sequence 408, App

This page gives you Search Results detail for the Application 10644548 and Search Result us-10-644-548-2.rpr.

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OM protein - protein search, using sw model

Run on: June 9, 2006, 19:27:11; Search time 43 Seconds

(without alignments)

1304.520 Million cell updates/sec

Title: US-10-644-548-2

Perfect score: 3263

Sequence: 1 MVSPRMSGLLSQTVILALIF......DVDPQGIYVISAPSIYAREA 583

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR 80:\*

1: pir1:\*

2: pir2:\*

3: pir3:\*

4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result No.	Score	Query Match	Length	DB	ID	Description
1 2 3 4 5 6 7 8 9	977.5 942.5 898 882 673 666.5 666.5 590.5	30.0 28.9 27.5 27.0 20.6 20.4 20.4 19.5 18.1	728 722 685 686 833 832 880 1220 2318 2321	2 2 2 2 2 2 2 2 2 2 2	I50719 I48324 JC7570 JC7569 S19087 A31246 S00670 A56136 S45306 S78549	C-Delta-1 - chicke DELTA-like 1 - mou Delta-4 protein - Delta-4 protein - gene Delta protein neurogenic protein neurogenic repetit jagged protein pre notch 3 protein - notch3 protein - h
11 12	588 566	18.0 17.3	1408 1064	2 2	S16148 A40136	gene serrate prote fibropellin Ia - s

13	558	17.1	2471	2	A49128
14	552	16.9	1203	2	A49175
15	544	16.7	1964	2	T09059
16	538.5	16.5	2703	1	A24420
17	537	16.5	2352	2	T30201
18	525.5	16.1	2437	2	S42612
19	513.5	15.7	2524	2	A35844
20	512	15.7	2531	2	T31070
21	510.5	15.6	2555	2	A40043
22	504	15.4	2531	2	S18188
23	500.5	15.3	2531	2	A46019
24	494	15.1	570	2	A48836
25	487.5	14.9	861	2	A48825
26	486	14.9	473	2	A56175
27	466	14.3	2139	2	A35672
28	437	13.4	387	2	B49175
29	434.5	13.3	385	2	S53718
30	433.5	13.3	1523	2	T13953
31	432	13.2	1372	2	T25933
32	430.5	13.2	383	2	S53716
33	428.5	13.1	1531	2	T42218
34	426.5	13.1	385	2	A54785
35	421.5	12.9	1687	2	T30176
36	415.5	12.7	1025	2	T42626
37	405.5	12.4	1429	2	S06434
38	401	12.3	1469	2	B36665
39	401	12.3	1480	2	A36665
40	396	12.1	308	2	JC7125
41	392	12.0	1722	2	E89753
42	383	11.7	601	2	D89711
43	383	11.7	601	2	T22025
44	362	11.1	1574	2	T13954
45	358.5	11.0	1295	2	A32901

cell-fate determin Motch B protein notch4 - mouse notch protein - fr Notch homolog prot transmembrane prot Xotch protein - Af notch homolog - se notch protein homo notch protein homo notch-1 protein fibropellin C prec Notch homolog Motc adhesive plaque pr crumbs protein - f Motch A protein homeotic protein d MEGF5 protein - ra hypothetical prote delta-like homeoti slit-1 protein hom preadipocyte facto EGF repeat transme secreted leucine-r homeotic protein l slit protein 2 pre slit protein 1 pre epidermal growth f protein F11C7.4 [i protein F40E10.4 [ hypothetical prote MEGF6 protein - ra glp1 protein precu

This page gives you Search Results detail for the Application 10644548 and Search Result us-10-644-548-2.rup.

start

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GenCore version 5.1.9 Copyright (c) 1993 - 2006 Biocceleration Ltd.

OM protein - protein search, using sw model

Run on: June 9, 2006, 19:23:41; Search time 300 Seconds

(without alignments)

1797.614 Million cell updates/sec

Title: US-10-644-548-2

Perfect score: 3263

Sequence: 1 MVSPRMSGLLSQTVILALIF......DVDPQGIYVISAPSIYAREA 583

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2849598 seqs, 925015592 residues

Total number of hits satisfying chosen parameters: 2849598

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : UniProt\_7.2:\*

1: uniprot\_sprot:\* 2: uniprot\_trembl:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	₹					
	Query					
Score	Match	Length	DB	ID	Descri	ption
		<b></b>				
3237	99.2	587	2	Q8NBS4 HUMAN	Q8nbs4	homo sapien
3231	99.0	618	1	DLL3_HUMAN		homo sapien
2733	83.8	585	2	Q3UND5_MOUSE		mus musculu
2729	83.6	592	1	DLL3_MOUSE		mus musculu
2707	83.0	589	1	DLL3_RAT		rattus norv
1132.5	34.7	642	2	Q7ZXT4_XENLA		xenopus lae
1130.5	34.6	642	2	P79941 XENLA		xenopus lae
1083.5	33.2	664	1	DLLC_BRARE		brachydanio
1073	32.9	615	1	DLLB_BRARE		brachydanio
977.5	30.0	728	2	Q90656_CHICK		gallus gall
975.5	29.9	723	1	DLL1 HUMAN		homo sapien
949	29.1	714	1	DLL1 RAT		rattus norv
942.5	28.9	722	1	DLL1 MOUSE		
942.5	28.9	722	2	Q6PFV7_MOUSE	Q6pfv7	mus musculu
	3237 3231 2733 2729 2707 1132.5 1130.5 1083.5 1073 977.5 975.5 949	Query Score Match  3237 99.2 3231 99.0 2733 83.8 2729 83.6 2707 83.0 1132.5 34.7 1130.5 34.6 1083.5 33.2 1073 32.9 977.5 30.0 975.5 29.9 949 29.1 942.5 28.9	Query Score Match Length  3237 99.2 587 3231 99.0 618 2733 83.8 585 2729 83.6 592 2707 83.0 589 1132.5 34.7 642 1130.5 34.6 642 1083.5 33.2 664 1073 32.9 615 977.5 30.0 728 975.5 29.9 723 949 29.1 714 942.5 28.9 722	Query Score Match Length DB  3237 99.2 587 2 3231 99.0 618 1 2733 83.8 585 2 2729 83.6 592 1 2707 83.0 589 1 1132.5 34.7 642 2 1130.5 34.6 642 2 1083.5 33.2 664 1 1073 32.9 615 1 977.5 30.0 728 2 975.5 29.9 723 1 949 29.1 714 1 942.5 28.9 722 1	Query Score Match Length DB ID  3237 99.2 587 2 Q8NBS4_HUMAN 3231 99.0 618 1 DLL3_HUMAN 2733 83.8 585 2 Q3UND5_MOUSE 2729 83.6 592 1 DLL3_MOUSE 2707 83.0 589 1 DLL3_RAT 1132.5 34.7 642 2 Q7ZXT4_XENLA 1130.5 34.6 642 2 P79941_XENLA 1130.5 33.2 664 1 DLLC_BRARE 1073 32.9 615 1 DLLB_BRARE 977.5 30.0 728 2 Q90656_CHICK 975.5 29.9 723 1 DLL1_HUMAN 949 29.1 714 1 DLL1_RAT 942.5 28.9 722 1 DLL1_MOUSE	Query Score Match Length DB ID Descrip  3237 99.2 587 2 Q8NBS4_HUMAN Q8nbs4 3231 99.0 618 1 DLL3_HUMAN Q9nyj7 2733 83.8 585 2 Q3UND5_MOUSE Q3und5 2729 83.6 592 1 DLL3_MOUSE 088516 2707 83.0 589 1 DLL3_RAT 088671 1132.5 34.7 642 2 Q7ZXT4_XENLA Q7ZXt4 1130.5 34.6 642 2 P79941_XENLA P79941 1083.5 33.2 664 1 DLLC_BRARE Q9iat6 1073 32.9 615 1 DLLB_BRARE Q9iat6 1073 32.9 615 1 DLLB_BRARE Q9iat6 977.5 30.0 728 2 Q90656_CHICK Q90656 975.5 29.9 723 1 DLL1_HUMAN 000548 949 29.1 714 1 DLL1_RAT P97677 942.5 28.9 722 1 DLL1_MOUSE Q61483

15	916.5	28.1	721	2	Q91902_XENLA	Q91902	xenopus lae
16	910.5	27.9	726	2	Q8AW87_CYNPY		cynops pyrr
17	903.5	27.7	772	1	DLLA BRARE		brachydanio
18	898	27.5	685	1	DLL4_HUMAN	Q9nr61	homo sapien
19	898	27.5	685	2	Q3KP23 HUMAN	Q3kp23	homo sapien
20	895	27.4	717	1	DLLD_BRARE	Q8uwj4	brachydanio
21	888	27.2	686	1	DLL4 MOUSE		mus musculu
22	882	27.0	686	2	Q9DBU9_MOUSE		mus musculu
23	853.5	26.2	669	2	Q4SC13_TETNG	Q4sc13	tetraodon n
24	808	24.8	645	2	Q5RGG6_BRARE	Q5rgg6	brachydanio
25	801	24.5	665	2	Q5SPB5_BRARE	Q5spb5	brachydanio
26	795	24.4	658	2	Q4RLS7_TETNG	Q4rls7	tetraodon n
27	765	23.4	684	2	Q8I498_CUPSA	Q8i498	cupiennius
28	711	21.8	777	2	Q4T963_TETNG	Q4t963	tetraodon n
29	696.5	21.3	1216	2	Q90Y55_BRARE	Q90y55	brachydanio
30	692.5	21.2	1216	2	Q5TZK7_BRARE	Q5tzk7	brachydanio
31	690.5	21.2	452	2	Q5ISL2_MACFA	Q5isl2	macaca fasc
32	678.5	20.8	1254	2	Q90Y56_BRARE	Q90y56	brachydanio
33	676.5	20.7	509	2	Q7Q0M5_ANOGA	Q7q0m5	anopheles g
34	674.5	20.7	1242	1	JAG1A_BRARE	Q90y57	brachydanio
35	674.5	20.7	1254	2	Q5TZK8_BRARE	Q5tzk8	brachydanio
36	674.5	20.7	1254	2	Q9YHU2_BRARE	Q9yhu2	brachydanio
37	673	20.6	794	2	Q8T4P0_LYTVA	Q8t4p0	lytechinus
38	673	20.6	833	1	DL_DROME	P10041	drosophila
39	660	20.2	807	2	Q8MP01_HALRO	Q8mp01	halocynthia
40	655.5	20.1	1128	2	Q4S6G8_TETNG	Q4s6g8	tetraodon n
41	655	20.1	1213	1	JAG1B_BRARE	Q90y54	brachydanio
42	654	20.0	611	2	Q4SZZ8_TETNG	Q4szz8	tetraodon n
43	653	20.0	1247	1	JAG2_MOUSE		mus musculu
44	649.5	19.9	1193	2	Q90819_CHICK	Q90819	gallus gall
45	649.5	19.9	1238	1	JAG2_HUMAN		homo sapien

```
RÉSULT 4
DLL3 MOUSE
ID
     DLL3 MOUSE
                    STANDARD;
                                    PRT;
                                           592 AA.
     088516; 035675; Q80W06; Q9QWL9; Q9QWZ7;
AC
DT
     01-DEC-2000, integrated into UniProtKB/Swiss-Prot.
DT
     01-NOV-1998, sequence version 1.
DT
     07-MAR-2006, entry version 51.
DE
     Delta-like protein 3 precursor (Drosophila Delta homolog 3) (M-Delta-
DE
     3).
GN
     Name=D113;
     Mus musculus (Mouse).
os
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC
OC
     Muroidea; Muridae; Murinae; Mus.
OX
     NCBI_TaxID=10090;
RN
     [1]
RP
     NUCLEOTIDE SEQUENCE (ISOFORM 1).
     STRAIN=C57BL/6 X DBA; TISSUE=Embryo;
RC
     MEDLINE=97417575; PubMed=9272948;
RX
     Dunwoodie S.L., Henrique D.M.P., Harrison S.M., Beddington R.S.P.;
RA
RT
     "Mouse Dll3: a novel divergent Delta gene which may complement the
RT
     function of other Delta homologues during early pattern formation in
RT
     the mouse embryo.";
RL
     Development 124:3065-3076(1997).
RN
RP
     NUCLEOTIDE SEQUENCE, AND ALTERNATIVE SPLICING.
RC
     STRAIN=129/SvJ;
RX
     MEDLINE=98324780; PubMed=9662403; DOI=10.1038/961;
     Kusumi K., Sun E.S., Kerrebrock A.W., Bronson R.T., Chi D.-C.,
RA
     Bulotsky M.S., Spencer J.B., Birren B.W., Frankel W.N., Lander E.S.;
RA
RT
     "The mouse pudgy mutation disrupts Delta homologue Dll3 and initiation
     of early somite boundaries.";
RT
RL
     Nat. Genet. 19:274-278 (1998).
RN
     [3]
     NUCLEOTIDE SEQUENCE (ISOFORM 1).
RΡ
RC
     TISSUE=Neural tube;
RA
     Nakayama K., Nakayama N., Tomooka Y., Hayashi Y., Takahashi M.;
RT
     "Specific expression of a divergent type of Delta in a set of earliest
RT
     generated neurons including the prospective subplate neurons.";
RL
     Submitted (APR-1998) to the EMBL/GenBank/DDBJ databases.
RN
RΡ
     NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).
RC
     STRAIN=C57BL/6; TISSUE=Brain;
     MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RX
RA
     Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA
     Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
     Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA
RA
     Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
     Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA
RA
     Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA
     Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA
     Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
     Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA
     Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA
     Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA
     Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA
     Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA
RA
     Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA
     Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
     Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA
     Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RA
```

```
RT
     "Generation and initial analysis of more than 15,000 full-length human
RT
     and mouse cDNA sequences.";
RL
     Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC
     -!- FUNCTION: Inhibits primary neurogenesis. May be required to divert
CC
         neurons along a specific differentiation pathway. Play a role in
CC
         the formation of somite boundaries during segmentation of the
CC
         paraxial mesoderm.
CC
     -!- SUBUNIT: Can bind and activate Notch-1 or another Notch receptor
CC
         (Probable).
CC
     -!- SUBCELLULAR LOCATION: Membrane; single-pass type I membrane
CC
        protein (Probable).
CC
     -!- ALTERNATIVE PRODUCTS:
CC
        Event=Alternative splicing; Named isoforms=2;
CC
CC
          IsoId=088516-1; Sequence=Displayed;
CC
        Name=1;
CC
          IsoId=088516-2; Sequence=VSP 001376;
CC
     -!- TISSUE SPECIFICITY: Predominantly expressed in the neuroectoderm
CC
        and paraxial mesoderm during embryogenesis.
CC
    -!- DOMAIN: The DSL domain is required for binding to the Notch
CC
CC
    -!- PTM: Ubiquitinated by MIB (MIB1 or MIB2), leading to its
CC
        endocytosis and subsequent degradation (By similarity).
CC
     -!- DISEASE: A truncating mutation in D113 is the cause of the pudgy
CC
         (pu) phenotype. Pudgy mice exhibit patterning defects at the
CC
        earliest stages of somitogenesis. Adult pudgy mice present severe
CC
        vertebral and rib deformities.
CC
    -!- SIMILARITY: Contains 1 DSL domain.
CC
    -!- SIMILARITY: Contains 6 EGF-like domains.
CC
    ______
CC
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    Distributed under the Creative Commons Attribution-NoDerivs License
CC
CC
    -----
DR
    EMBL; AF068865; AAC40170.1; -; Genomic DNA.
DR
    EMBL; AF068865; AAC40169.1; -; Genomic DNA.
DR
    EMBL; Y11895; CAA72637.1; -; mRNA.
DR
    EMBL; AB013440; BAA33716.1; -; mRNA.
DR
    EMBL; BC052002; AAH52002.1; -; mRNA.
DR
    HSSP; P00740; 1EDM.
DR
    Ensembl; ENSMUSG00000003436; Mus musculus.
DR
    MGI; MGI:1096877; Dll3.
DR
    GO; GO:0005615; C:extracellular space; TAS.
DR
    GO; GO:0016021; C:integral to membrane; TAS.
DR
    GO; GO:0005112; F:Notch binding; NAS.
DR
    GO; GO:0001709; P:cell fate determination; NAS.
DR
    GO; GO:0007386; P:compartment specification; IMP.
    GO; GO:0001701; P:embryonic development (sensu Mammalia); NAS.
DR
DR
    GO; GO:0007399; P:neurogenesis; NAS.
    GO; GO:0007219; P:Notch signaling pathway; NAS.
DR
DR
    GO; GO:0001501; P:skeletal development; IMP.
DR
    InterPro; IPR001774; DSL.
DR
    InterPro; IPR006210; EGF.
DR
    InterPro; IPR001438; EGF_2.
DR
    InterPro; IPR000742; EGF 3.
DR
    InterPro; IPR001881; EGF Ca bd.
DR
    InterPro; IPR013111; EGF extracell.
DR
    InterPro; IPR006209; EGF like.
DR
    InterPro; IPR013032; EGF like req.
    InterPro; IPR011651; Notch_ligand_N.
DR
DR
    Pfam; PF00008; EGF; 5.
DR
    Pfam; PF07974; EGF 2; 1.
```

```
DR
     Pfam; PF07657; MNNL; 1.
DR
     PRINTS; PR00010; EGFBLOOD.
DR
     SMART; SM00181; EGF; 6.
DR
     PROSITE; PS51051; DSL; FALSE NEG.
     PROSITE; PS00022; EGF_1; 6.
DR
DR
     PROSITE; PS01186; EGF_2; 6.
DR
     PROSITE; PS50026; EGF 3; 6.
KW
    Alternative splicing; Developmental protein; Differentiation;
KW
     EGF-like domain; Membrane; Notch signaling pathway; Repeat; Signal;
KW
    Transmembrane; Ubl conjugation.
FT
     SIGNAL
                 1
                        32
                                 Potential.
    CHAIN
FT
                 33
                       592
                                 Delta-like protein 3.
FT
                                 /FTId=PRO_0000007510.
    TOPO DOM
FT
                       490
                 33
                                 Extracellular (Potential).
    TRANSMEM
FT
                491
                       511
                                 Potential.
FT
    TOPO DOM
                512
                       592
                                 Cytoplasmic (Potential).
FT
    DOMAIN
                174
                       213
                                DSL.
FT
    DOMAIN
                214
                       247
                                EGF-like 1.
FT
    DOMAIN
                272
                       308
                                EGF-like 2.
FT
    DOMAIN
                310
                       349
                                EGF-like 3.
FT
    DOMAIN
                351
                       387
                                EGF-like 4.
FT
    DOMAIN
                389
                       425
                                EGF-like 5.
                427
FT
    DOMAIN
                       463
                                EGF-like 6.
    DISULFID
FT
                218
                       229
                                By similarity.
FT
    DISULFID
                222
                       235
                                By similarity.
FT
    DISULFID
                237
                       246
                                By similarity.
FT
    DISULFID
                276
                       287
                                By similarity.
FT
    DISULFID
                281
                       296
                                By similarity.
FT
    DISULFID
                298
                       307
                                By similarity.
FT
    DISULFID
                314
                       325
                                By similarity.
FT
    DISULFID
                319
                       337
                                By similarity.
FT
    DISULFID
                339
                       348
                                By similarity.
FΤ
    DISULFID
                355
                       366
                                By similarity.
FT
    DISULFID
                360
                       375
                                By similarity.
FT
    DISULFID
                377
                       386
                                By similarity.
FT
                393
    DISULFID
                                By similarity.
                       404
FT
    DISULFID
                398
                       413
                                By similarity.
FT
    DISULFID
                415
                       424
                                By similarity.
FT
    DISULFID
                431
                       442
                                By similarity.
    DISULFID
FT
               436
                       451
                                By similarity.
    DISULFID
FT
                453
                       462
                                By similarity.
FT
    VARSPLIC
                585
                       592
                                DWLIQVLF -> A (in isoform 1).
FT
                                /FTId=VSP 001376.
FT
    CONFLICT
                94
                       94
                                E \rightarrow K \text{ (in Ref. 3)}.
FT
    CONFLICT
                401
                       401
                                G \rightarrow A \text{ (in Ref. 1)}.
    SEQUENCE
               592 AA; 62069 MW; 1A84F8022E7E7DCC CRC64;
 Query Match
                         83.6%; Score 2729; DB 1; Length 592;
 Best Local Similarity
                        82.8%;
                               Pred. No. 1.2e-163;
 Matches 485; Conservative
                              33; Mismatches
                                                62;
                                                     Indels
                                                              6;
                                                                  Gaps
                                                                          3;
Qy
           1 MVSPRMSGLLSQTVILALIFLPQTRPAGVFELQIHSFGPGPGPGAPRSPCSARLPCRLFF 60
             Db
           1 MVSLQVSP-LSQTLILAFL-LPQALPAGVFELQIHSFGPGPGLGTPRSPCNARGPCRLFF 58
          61 RVCLKPGLSEEAAESPCALGAALSARGPVYTEQPGAPAPDLPLPDGLLQVPFRDAWPGTF 120
Qу
             111111111
                                                Db
          59 RVCLKPGVSQEATESLCALGAALSTSVPVYTEHPGESAAALPLPDGLVRVPFRDAWPGTF 118
         121 SFIIETWREELGDQIGGPAWSLLARVAGRRRLAAGGPWARDIQRAGAWELRCSYRARCEP 180
Qу
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Db	119	SLVIETWREQLGEHAGGPAWNLLARVVGRRRLAAGGPWARDVQRTGTWELHFSYRARCEP 178
Qy	181	PAVGTACTRLCRPRSAPSRCGPGLRPCAPLEDESVCRAGCSPEHGFCEQPGECRCL 236
Db	179	PAVGAACARLCRSRSAPSRCGPGLRPCTPFPDECEAPSVCRPGCSPEHGYCEEPDECRCL 238
Qy	237	EGWTGPLCTVPVSTSSCLSPRGPSSATTGCLVPGPGPCDGNPCANGGSCSETPRSFECTC 296
Db	239	EGWTGPLCTVPVSTSSCLNSRVPGPASTGCLLPGPGPCDGNPCANGGSCSETSGSFECAC 298
Qy	297	PRGFYGLRCEVSGVTCADGPCFNGGLCVGGADPDSAYICHCPPGFQGSNCEKRVDRCSLQ 356
Db	299	PRGFYGLRCEVSGVTCADGPCFNGGLCVGGEDPDSAYVCHCPPGFQGSNCEKRVDRCSLQ 358
Qy	357	PCRNGGLCLDLGHALRCRCRAGFAGPRCEHDLDDCAGRACANGGTCVEGGGAHRCSCALG 416
Db	359	PCQNGGLCLDLGHALRCRCRAGFAGPRCEHDLDDCAGRACANGGTCVEGGGSRRCSCALG 418
Qy	417	FGGRDCRERADPCAARPCAHGGRCYAHFSGLVCACAPGYMGARCEFPVHPDGASALPAAP 476
Db	419	FGGRDCRERADPCASRPCAHGGRCYAHFSGLVCACAPGYMGVRCEFAVRPDGADAVPAAP 478
Qy	477	PGLRPGDPQRYLLPPALGLLVAAGVAGAALLLVHVRRRGHSQDAGSRLLAGTPEPSVHAL 536
Db	479	RGLRQADPQRFLLPPALGLLVAAGLAGAALLVIHVRRRGPGQDTGTRLLSGTREPSVHTL 538
Qy	537	PDALNNLRTQEGSGDGPSSSVDWNRPEDVDPQGIYVISAPSIYARE 582
Db	539	PDALNNLRLQDGAGDGPSSSADWNHPEDGDSRSIYVIPAPSIYARE 584